

### **Amendments to the Claims**

Claim 1 (original): A method of isolating fully thioated single stranded antisense oligonucleotides from a biological solution, which method comprises the steps of contacting the biological solution with an immobilised metal ion adsorption chromatography (IMAC) resin to adsorb antisense oligonucleotides to said resin and subsequently contacting the resin with an eluent under conditions that provide desorption of the antisense oligonucleotides from said resin, wherein the fully thioated antisense oligonucleotides are separated from incorrectly thioated antisense oligonucleotides in said solution.

Claim 2 (currently amended): ~~A method according to~~ The method of claim 1, wherein the biological solution results from a synthesis of antisense oligonucleotides.

Claim 3 (currently amended): ~~A method according to~~ The method of claim 1 ~~or 2~~, wherein fully thioated antisense oligonucleotides are separated from incorrectly synthesised oligonucleotides.

Claim 4 (currently amended): ~~A method according to any one of the preceding claims,~~ The method of claim 1, wherein fully thioated antisense oligonucleotides are separated from incorrectly thioated antisense oligonucleotides containing 1-5, ~~such as 1 or 2,~~ bonds without thioation.

Claim 5 (currently amended): ~~A method according to any one of the preceding claims,~~ The method of claim 1, wherein the metal ion is  $\text{Zr}^{2+}$  or  $\text{Fe}^{3+}$ .

Claim 6 (currently amended): ~~A method according to any one of the preceding claims;~~  
The method of claim 1, wherein the antisense oligonucleotides are of a size in the range of 5-30, ~~and preferably 15-25~~, base pairs.

Claim 7 (currently amended): ~~A method according to any one of the preceding claims;~~  
The method of claim 1, wherein the pH of the biological solution is below about 7 during the adsorption of antisense oligonucleotides.

Claim 8 (currently amended): ~~A method according to any one of the preceding claims;~~  
The method of claim 1, which in addition comprises a subsequent step of polishing the isolated antisense oligonucleotides.

Claim 9 (original): Use of an immobilised metal ion adsorption chromatography (IMAC) resin for isolation of fully thioated single stranded antisense oligonucleotides from incorrectly thioated antisense oligonucleotides in a biological solution.